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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,935	04/01/2005	Robert Massen	740612-188	4849
41972 7590 01/30/2008 LAW OFFICES OF STUART J. FRIEDMAN 28930 RIDGE ROAD MT. AIRY, MD 21771			EXAMINER NGUYEN, SANG H	
			ART UNIT 2886	PAPER NUMBER
			MAIL DATE 01/30/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/510,935	Applicant(s) MASSEN, ROBERT	
	Examiner Sang Nguyen	Art Unit 2886	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-13 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/09/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's response to amendment filed on 11/09/07 has been entered. It is noted that the application contains claims 1-13 by the amendment on 11/09/07.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 11/09/07 has been entered. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

Claims 5-6 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 5-6. See MPEP § 608.01(n). Accordingly, the claims 5-6 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 provides for the use of "using photogrammetrical methods", but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. Also, the language of the feature "using photogrammetrical methods" is not clear because what does applicant mean "photogrammetrical methods"?, it is meant plurality of photogrammetrical methods, e.g., determining, calculating, repairing, recovering, or selecting... the 3D shape of the interior space.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

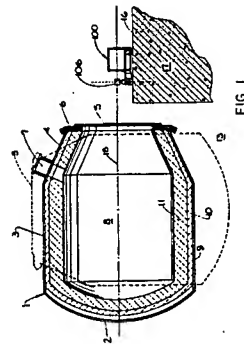
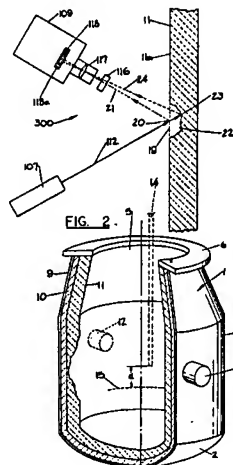
Claims 1, 7-8, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neiheisel et al (U.S. Patent No. 4,893,933) in view of Riegl et al (U.S. Patent No. 6,852,975).

Regarding claim 1; Neiheisel et al discloses a method of optically detecting the three-dimensional shape of an interior space defined by an inner wall, comprising the steps of:

providing said interior space (8 of figure 1) of a vessel (1 of figure 1) in snug contact with the inner wall vessel (1 of figures 1-2) with an elastic envelope (e.g., vessel is formed from three concentrically positioned shells such as steel shell [9 of figure 1], a safety lining [10 of figure 1] and col.1 lines 7-32 and col.4 lines 29-60) and marked with marks (e.g., innermost working lining [11 of figure 1]) facing the inside of the interior space (8 of figure 1) and adapted to be evaluated photogrammetrically by a inspection device (100 of figures 1-2 and col.3 lines 23-39) with two dimensional linear array sensor (118 of figure 2) in a receiver (109 of figure 2), wherein at least one of the two dimensional linear array sensor (118 of figure 2) in a receiver (109 of figure 2) for producing a number of overlapping image recordings (figures 4 and 12) of said interior space marked (8, 11 of figures 1-2) . See figures 1-12.

U.S. Patent Jan. 16, 1990 Sheet 2 of 10 4,893,933

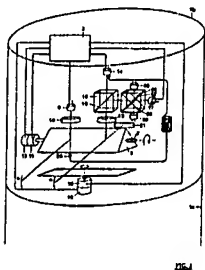
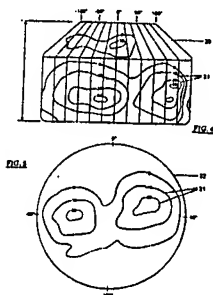
U.S. Patent Jan. 16, 1990 Sheet 1 of 10 4,893,933



Neiheisel et al discloses all of features of claimed invention except for using photogrammetrical method for determining from said recordings the three-dimensional shape of that part of said interior space that was detected by said overlapping recordings. However, Riegl et al teaches that it is known in the art to provide step of using photogrammetrical methods for determining from said recordings the three-dimensional shape of that part of said interior space that was detected by said overlapping recordings (31 of figure 4-5). See figures 1-6.

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Neiheisel et al with using photogrammetrical method for determining from said recordings the three-dimensional shape of that part of said interior space that was detected by said overlapping recordings as taught by Riegl et al for the purpose of reducing with background brightness avoid overdrive from the background noise.

Regarding claim 7; Neiheisel et al discloses the interior space is the interior (8 of figure 1) of an orifice (5 of figure 1) of the body (1 of figure 1).

Regarding claims 8, and 10; Neigeisel et al discloses all of features of claimed invention except for a video camera is used as imaging device and that the overlapping image recordings of the interior space are recorded in the form of one or more video sequences. However, Riegl et al teaches that it is known in the art to provide a video camera (17, 58, 59 of figure 3) is used as imaging device and that the overlapping image recordings of the interior space are recorded in the form of one or more video sequences (figures 4-5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Neiheisel et al with a video camera is used as imaging device and that the overlapping image recordings of the interior space are recorded in the form of one or more video sequences as taught by Riegl et al for the purpose of reducing with background brightness avoid overdrive from the background noise.

Regarding claim 11; Neiheisel et al discloses all of features of claimed invention except for the interior space is mapped on the imaging device in radial bands via a

collar-shaped mirror. However, Riegl et al teaches that it is known in the art to provide the interior space is mapped on the imaging device in radial bands via a collar-shaped mirror (figures 4-5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Neiheisel et al with the interior space is mapped on the imaging device in radial bands via a collar-shaped mirror as taught by Riegl et al for the purpose of reducing with background brightness avoid overdrive from the background noise.

Claims 2, 4, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neiheisel et al and Riegl et al as applied to claim 1 above, and further in view of Pelrine (U.S. Patent No. 5,392,715).

Regarding claim 2; Neiheisel et al and Riegl et al discloses all of features of claimed invention except for the side of the marked envelope facing the inner wall is provided with a means adhering to said inner wall prior to insertion into the interior space. However, Pelrine teaches that it is known in the art to provide the side of the marked envelope facing the inner wall is provided with a means adhering to said inner wall prior to insertion into the interior space (col.1 lines 15-27 and col.2 lines 42-68 and figures 5a-5c). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Neiheisel et al with the side of the marked envelope facing the inner wall is provided with a means adhering to said inner wall prior to insertion into the interior space as taught by Prlrine for the purpose of repairing inner walls of pipeline more accuracy.

Regarding claims 4; Neiheisel et al and Riegl et al discloses all of features of claimed invention except for the interior space is the interior of footwear or the interior space is the interior of a prosthesis funnel for receiving a limb stump or the interior space constitutes the interior of a product which is in contact with the human body during use. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Jokinen with the interior space is the interior of footwear or the interior space is the interior of a prosthesis funnel for receiving a limb stump or the interior space constitutes the interior of a product which is in contact with the human body during use, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. In re Venner, 120 USPQ 192.

Regarding claim 9; Neiheisel et al and Riegl et al discloses all of features of claimed invention except for the imaging device(s) is/are rotated axially and successively record(s) both axially and radially overlapping recordings of the marked interior space. However, Pelrine teaches that it is known in the art to provide the imaging device(64 of figure 1)) is/are rotated axially and successively record(s) both axially and radially overlapping recordings of the marked interior space (9 of figure 1 and col.5 lines 55-66). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Neiheisel et al with the imaging device(s) is/are rotated axially and successively record(s) both axially and radially overlapping recordings of the marked interior space as taught by Prlrine for the purpose of repairing inner walls of pipeline more accuracy.

Regarding claim 12; Neiheisel et al and Riegl et al discloses all of features of claimed invention except for the imaging device(s) is/are guided in the interior space by spacers. However, Pelrine teaches that it is known in the art to provide the imaging device(64 of figure 1) is/are guided in the interior space by spacers (9, 10 of figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Neiheisel et al with the imaging device(s) is/are guided in the interior space by spacers as taught by Prlrine for the purpose of repairing inner walls of pipeline more accuracy.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neiheisel et al and Riegl et al as applied to claim 1 above, and further in view of Ikeda et al (U.S. Patent No. 5,911,694).

Regarding claim 13; Neiheisel et al and Riegl et al discloses all of features of claimed invention except for the overlapping image fields are transmitted from the interior space to one or more imaging device(s) located outside the interior space via an endoscopic system. However, Ikeda et al teaches that it is known in the art to provide the overlapping image fields are transmitted from the interior space to one or more imaging device (76, 77, 79 of figure 10) located outside the interior space via an endoscopic system (figure 10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine method of Neiheisel et al with the imaging device(s) is/are guided in the interior space by spacers as taught by Ikeda et al for the purpose of detecting organic tissue more accuracy.

U.S. Patent Jun. 15, 1999 Sheet 4 of 29 5,911,694

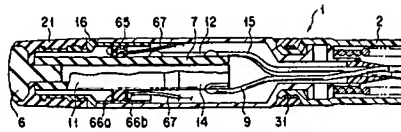


FIG. 9

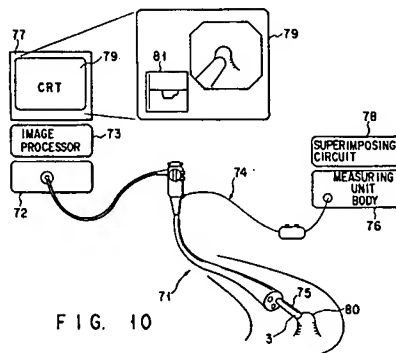


FIG. 10

Allowable Subject Matter

Claims 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record, taken alone or in combination, fails discloses or render obvious method of optically detecting three dimensional shape of an interior space comprising all the specific elements with the specific combination including of an inflatable cover is inserted into the marked envelope, said envelope is placed into the interior space with said cover and there said envelope is pressed against the inner wall of the interior space to be detected by admitting internal pressure into said cover such

that it is in snug contact with said inner wall, and in that afterwards said cover is relieved from pressure and removed, in order to make room for the insertion of one or more imaging devices in set forth limitation of claim 3.

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Scholdstrom et al (4025192) discloses optical measuring method.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Art Unit: 2886

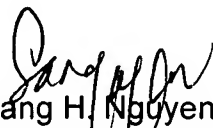
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on (571) 272-2800 ext. 86. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 24, 2008


Sang H. Nguyen
Primary Patent Examiner
Art Unit 2886